Colchester Sewer and Water Commission

Colchester

2005 Annual Water-Quality Report

Dear Customer: We are pleased to present a summary of the quality of the water provided to you during the past year. The Safe Drinking Water Act (SDWA) requires that utilities issue an annual "Consumer Confidence" report to customers in addition to other notices that may be required by law.

The bottom line: Is the water safe to drink? We are proud to report that the water provided by the Colchester Sewer and Water Commission meets or exceeds all current federal and state drinking-water standards.

Last year we conducted tests for over 80 contaminants. We only detected 10 of those contaminants, and of those, only Sodium was found on two occasions out of 15 samplings at a level slightly higher than the State guideline(31 and 33 ppm vs. 28 ppm recommended by the State), which is a notification level only and should be of no concern to healthy individuals. Recent sampling indicates we are well below the guideline.

This report is a snapshot of last year's water quality. Included are details of where our water comes from, what it contains, and the risks our water testing and treatment are designed to prevent. Colchester Sewer and Water Commission is committed to providing you with a safe and reliable water supply. Informed consumers are our best allies in maintaining safe drinking water.

We encourage public interest and participation in our community's decisions affecting drinking water. Regular Commission meetings occur on the second Wednesday of each month, at Colchester Town Hall at 7:00 pm. The public is welcome. Find out more about Colchester Sewer and Water Commission on the Internet at [www.colchesterct.net].

Overview

In 2005, the Department focused on advancing the Treatment Plant Improvement Project, improving the reliability of the aeration tower, and replacing a primary well that was experiencing reduced yield. The Town secured a Community Development Block Grant to perform emergency repairs to the aeration tower and to replace the failing well. Temporary repairs were made to the tower while the scope of emergency repairs could be defined and designed. Initial field tests were completed for the replacement well, the necessary permits obtained, and construction documents for both projects were prepared. Bonding for the Treatment Plant project was approved and final design initiated.

Water Source

Water supplied to the Town's municipal water users comes from a series of groundwater wells.

What Does The Following Table Mean?

The table below lists all of the drinking water contaminants that we detected, even in the most minute traces, during 2005. The table contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health (MCLG), the amount detected, the usual sources of such contamination, footnotes explaining our findings, and a key to units of measurement. Definitions of MCL and MCLG are important and are further defined below. The Detected Level is the highest level detected in the sampling sequence. The Detected Range represents the lowest and highest levels detected during multiple sampling sequences. A narrow range represents a relatively consistent condition whereas a wide range may represent a single condition or spike in the readings. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentration of these contaminants do not change frequently.

Maximum Contaminant Level or MCL: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal or MCLG: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Key To Table

AL = Action Level
MCL = Maximum Contaminant Level
MCLG = Maximum Contaminant Level Goal
MFL = million fibers per liter
NTU = Nephelometric Turbidity Units
mrem/year = millirems per year (a measure of radiation absorbed by the body)
pci/l = picocuries per liter (a measure of radioactivity)
ppm = parts per million, or milligrams per liter (mg/l)
ppb = parts per billion, or micrograms per liter (µg/l)
ppt = parts per trillion, or nanograms per liter
ppq = parts per quadrillion, or picograms per liter
TT = Treatment Technique
n/a = not applicable; a MCL or MCLG has not been set

Contaminant	Date Tested	Unit	MCL	MCLG	Detected Level	Detected Range	Major Sources	Violation
Inorganic Contaminants								
Lead	9-05	ppb	AL=15	0	3.80	0 – 3.8	Corrosion of household plumbing systems; Erosion of natural deposits	NO
Copper	9-02	ppm	AL=1.3	AL=1.3	1.4	0.039 – 1.4	Corrosion of household plumbing systems; erosion of natural deposits	NO
Sodium	6-20-05	ppm	n/a	n/a	33.0	19 - 33	erosion of natural deposits; residual in aquifer from State DOT road salt use near wells	NO
Nitrate	4-19-05	ppm	10	10	0.62	0 – 0.62	fertilizer, sewage, feed lots	NO
Manganese	1-11-05	ppb	50*	n/a	58.00	0 - 58	erosion of natural deposits	NO

Microbiological Contaminants								
1 Turbidity	11-22-05	NTU	5.0	n/a	1.5	0.0-1.5	fine sediment in aquifer pumping zone	NO
Radioactive Contaminants								
Gross Alpha	1-11-05	pCi/L	15	0	3.3	0.0-3.3	Erosion of natural deposits	NO
Combined Radium 226/228	10-6-04	pCi/L	5	0	1.3	0.0-1.3	Erosion of natural deposits	NO
Volatile Organic Contaminants								
Tetrachloroethylene	8-23-05	ppb	5	0	0.65	0.56 – 0.65	Discharge from factories and dry cleaners	NO
MTBE	12-13-05	ppb	70**	n/a	1.3	0.0 - 1.3	Air deposition from vehicle exhaust, underground fuel storage tanks	NO
Disinfectant By-Products								
TTHMs (Total Trihalomethanes)	7-25-05	ppb	80	0	8.27	5.26 –8.27	By-product of drinking water chlorination	NO
THAs (Total Haloacetic Acids)	9-13-05	ppb	60	0	18	0 –18	By-product of drinking water disinfection	NO

Water-Quality Table Footnotes

1 Turbidity of less than 5.0 NTU typically not visible to the naked eye
* Levels described represent SMCL (secondary MCLs) indicating there may be an aesthetic issue as compared to a health issue
** No current regulatory standard – DPH Guideline

Some contaminants detected and reported on prior year Water Quality Reports were not identified above detectable limits during testing in 2005 and therefore do not show up in this report. Examples include Nickel, Nitrite, Chloride, and Barium.

Unregulated Contaminants

Colchester Sewer and Water Commission did not test for Cryptosporidium during the reporting year. Tests conducted quarterly throughout 1993 and 1994 indicated Cryptosporidium were not detected in any of the samples.

Several years of quarterly and semi-annual testing within our distribution system showed radon readings in our water are low and should not be cause for concern. 2004 radon levels ranged from 245 to 1227 picocuries per litre (pCi/l). The U.S. Environmental Protection Agency (EPA) is preparing a regulation which will specify a Maximum Contaminant Level for radon. At this time, the EPA and the American Water Works Association (AWWA) are recommending a MCL of 4,000 pCi/l with public notification of all areas of radon exposure (not just from groundwater) as well as mitigation procedures. Radon is an odorless, tastless, radioactive gas that can move up through the ground and into a home through cracks and holes in the foundation. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other activities. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in you home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 pCi/L of air or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call the Town Health Department or the EPA's Radon Hotline (800-SOS-RADON).

Additional Health Information

To ensure that tap water is safe to drink, EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

(A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
(B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
(C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water runoff, and residential uses.
(D) Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.
(E) Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems.
FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.
Some people may be more vulnerable to contaminants in drinking water than is the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline (800-426-4791).

The State Department of Public Health performed an assessment of our drinking water sources in conjunction with a source water assessment for all community and non-community public drinking water sources in Connecticut. The completed assessment report is available for access on the Drinking Water Division's web site. The DWD web site address is www.dph.state.ct.us/BRS/Water/DED.htm

Concerning Lead in Our Water

At the sampling frequency and quantity required for the Town of Colchester system by the Connecticut Department of Public Health, lead was not detected in excess of the action level (see Table above). It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink water containing lead in excess of the action level over many years could develop kidney problems or high blood pressure. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

Concerning Copper in Our Water

At the sampling frequency and quantity required for the Town of Colchester system by the Connecticut Department of Public Health, copper was not detected in excess of the action level (see Table above). Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

National Primary Drinking Water Regulation Compliance

Variances and Exemptions

Under a waiver granted on February 9, 1999 by the State Department of Public Health granted our northern wells a waiver for dioxin and endothall testing because potential sources of these compounds do not exist within the aquifer recharge area. The same waiver was granted for the western wells on September 28, 1993.

This report was prepared in accordance with the requirements of the CT. Department of Public Health and the Safe Drinking Water Act.
We'll be happy to answer any questions about Colchester Sewer and Water Commission and our water quality. Call us at 537-7288 Monday through Friday 8:00 a.m. to 4:30 p.m., except holidays.

Source Water Protection

Source water is untreated water from streams, rivers, lakes, or underground aquifers that is used to supply public drinking water. Preventing drinking water contamination at the source makes good public health sense, good economic sense, and good environmental sense. You can be aware of the challenges of keeping drinking water safe and take an active role in protecting drinking water. There are lots of ways that you can get involved in drinking water protection activities to prevent the contamination of the ground water source. Dispose properly of household chemicals, help clean up the watershed that is the source of your community's water, attend public meetings to ensure that the community's need for safe drinking water is considered in making decisions about land use. Contact us at 537-7288 for more information on source water protection, or contact the Environmental Protection Agency (EPA) at 1-800-426-4791. You may also find information on EPA's website at www.epa.gov/safewater/protect.html.

Water Conservation

Water is a limited resource so it is vital that we all work together to maintain it and use it wisely. Here are a few tips you can follow to help conserve:

- Check for leaky toilets (put a drop of food coloring in the tank, let it sit, if the water in the bowl turns color, you have a leak). A leaking faucet or toilet can dribble away thousands of gallons of water a year.
- Consider replacing your 5-gallon per flush toilet with an efficient 1.6 gallon per flush unit. This will permanently cut your water consumption by as much as 25%
- Run only full loads in dishwashers and washing machines. Rinse all hand-washed dishes at once.
- Turn off the faucet while brushing teeth or shaving.
- Store a jug of ice water in the refrigerator for a cold drink.
- Water lawn and plants in the early morning or evening hours to avoid excess evaporation. Don't water on windy, rainy, or very hot days.
- Water shrubs and gardens using a slow trickle around the roots. A slow soaking encourages deep root growth, reduces leaf burn or mildew and prevents water loss. Select low-water demanding plants that provide an attractive landscape without high water use.
- Apply mulch around flowers, shrubs, vegetables and trees to reduce evaporation, promote plant growth and control weeds. Shrubs and ground covers require less maintenance, less water and provide year-round greenery.
- Be sure that your hose has a shut-off nozzle. Hoses without a nozzle can spout 10 gallons more per minute.
- When washing your car, wet it quickly, turn off the spray, wash it with soapy water from the bucket, rinse quickly.
- Be sure sprinklers water only your lawn, not the pavement.
- Never use the hose to clean debris off your driveway or sidewalk. Use a broom.
- Rinse other items, such as bicycles, on the lawn to give your grass an extra drink.